

BRIHANMUMBAI MUNICIPAL CORPORATION
CENTRAL PURCHASE DEPARTMENT

Sub: Minutes of Pre-bid meeting held on 14.03.2024 at 3.00 p.m. for Supply, Installation, Testing and Commissioning of **Ultra Sound Sonography machine (17 Nos.)** along with standard accessories and 3 years warranty and 7 years CMC for use of various BMC Hospitals

Ref: 2024_MCGM_1026532_1

Pre-bid meeting was arranged on **14.03.2024 at 3.00 p.m.** under the Chairmanship of Hon. A.M.C. (W.S.) to discuss & finalize the specifications of **Ultra Sound Sonography machine (17 Nos.)** to be procured for various hospitals of BMC, through Mahatender portal. Following officers of BMC and company representatives were present.

BMC Officers					
Sr. No.	Name	Designation	Hospital/Department		
1.	Shri. Vijay Balamwar	Jt. M. C.	CPD		
2.	Shri. Rajesh Chavan	C.A.	CPD		
3.	Shri. Sushil Chavan	Dy.C.E.(M&E)	CPD		
4.	Dr. Sunita Tibrwala	Hod & Prof. (Radiology. dept.)	Cooper Hospital		
5.	Dr. Shenaz Saifi	Add. Prof. (Radiology. dept.)	Nair Hospital		
6.	Dr. Hemangini Thakkar	Hod & Prof. (Radiology. dept.)	KEM		
7.	Dr. Anagha Joshi	Hod & Prof. (Radiology. dept.)	LTMG		
8.	Shri. Aniket Deshmukh	Ex.Eng. (M&E)	CPD		
Company representatives					
Sr. No.	Name	Name of Company	Name of OEM	E-mail ID	Mobile no.
1.	Mr. Rajeev	M/s Samsung	M/s Samsung	rajeev.s@samsung.com	9987486074
2.	Mr. Sagar D	M/s Konica	M/s Konica	Sagar.d@mi.konicaminolta.in	8879107593
3.	Mr. Bhavesh Kumar	M/s. Fujifilm	M/s Fujifilm	Bhavesh.kumar@fujifilm.com	8447238526
4.	Mr. Surya Prakash	M/s Wipro GE Healthcare	M/s Wipro GE	Suryaprakash.prakash@gehealthcare.com	9958446171
5.	Mr. Nilesh Dodani	M/s Philips India	M/s Philips	Nilesh.dodani@philips.com	9920935797
6.	Mrs. Saiee Sathe	M/s Life Care Medical System	M/s Philips	saieesathe@lcms.com	9321144503

7.	Mr. Govind Gore	M/s Life Care Biomedicals	M/s Philips	Govind.gore@lcms.in	7506944530
8.	Mr. Shantanu Sabnis	M/s Mindray	M/s Mindray	Shantanu.sabnis@mindray.com	9819612993

Hon. AMC(WS) sir instructed to discuss the suggestions from bidders M/s Samsung India Pvt. Ltd., M/s Philips India Pvt. Ltd., M/s Konica Minolta, m/s Wipro GE, M/s Fujifilm on technical specifications. After reviewing all suggestions/objections, concerned HoDs has made following changes in technical specifications.

Suggestion / objections received from M/s Konica Minolta Healthcare India Pvt. Ltd..			
Item No.	Specification of BMC	Suggestion of Bidder / Opinion of HOD	Decision taken
18.	System should allow for live image and archive images side-by-side or quad display on a single monitor. This display shall allow any type of image on either side.	Dual and quad display available in system for comparison. Every Ultrasound units do not need such features.	Technical specification prevails
40-a-iii)	Neonatal Cardiac Phased array Cardiac array transducer 4.5 Mhz to 12 Mhz	Neonatal Cardiac Phased array probe will increase the machine cost. Request to revise this points so that more Vendors can participate	Technical specification prevails
Suggestion / objections received from M/s Wipro GE Healthcare Pvt. Ltd.			
21-a.	System must be offered with at least 21-inch high resolution Flat panel, medical grade monitor with wide viewing angles and good color resolution.	a) system must be offered with at least 23-inch high resolution Flat panel, medical grade monitor with wide viewing angles and good color resolution	Technical specification prevails
27.	System should have offline quantification workstation for analyzing and quantification 2D and 3D data sets along with latest desktop with CD/DVD writer and Image management software with IMT, ROI, review of 3D/4D color and fetal STIC data sets (Software & hardware should be supplied for offcart quantification).	Need clarity on functioning on point # 27. Do we need to provide any 3rd party software which does all the asked workflow	System should have offline quantification workstation for analyzing and quantification 2D and 3D data sets along with latest desktop with CD/DVD writer and Image management software with IMT, ROI, review of 3D/4D color and fetal STIC data sets (Software & hardware should be supplied for offcart

	<p>Image Management System (IMS) Hardware & Software with BMP, JPEG, MPEG, AVI and DICOM image receiving facility should be installed in the Desk Top computer. Additional software in PC to convert DICOM images to JPEG format for colour & B/W prints on medical grade Colour Laser IRC 3020 printer of 600 DPI.(DICOM3 ready HL7 version 3)</p> <p>All software should be licensed for entire life of the system and upgradeable to 3D & 4D</p>		<p>quantification). Image Management System (IMS) Hardware & Software with BMP, JPEG, MPEG, AVI and DICOM image receiving facility should be installed in the Desk Top computer. Additional software in PC to convert DICOM images to JPEG format for colour & B/W prints on medical grade Colour Laser IRC 3020 printer of 600 DPI.(DICOM3 ready HL7 version 3)</p> <p>All software should be licensed for entire life of the system and upgradeable to 3D & 4D</p>
32-b	<p>Ultrasound Jelly Warmer with capacity of at least 3 bottles.</p>	<p>Gel warmer capacity to be reduced to 1. This will be inbuilt. External gel warmers are available if needed</p>	<p>Ultrasound Jelly Warmer with capacity of at least 3 1(One) bottles.</p>
		<p>Additional specification to be added: Request to add shearwave elastography availability as standard on convex, linear and TV probe. Fat quantification available as standard for liver steatosis</p>	<p>Not accepted</p>
<p>Suggestion / objections received from M/s Philips India Pvt. Ltd.</p>			
3.	<p>System must be offered with a minimum of 8,00,000 and more digital processing channels or 180 and hardware channels. Technical data sheet should enclosed in technical bid to support the number of channels on the system or letter from the manufacturer mentioning the above should be provided.</p>	<p>System must be offered with a minimum of 40,00,000 and more digital processing channels or 180 and hardware channels. Technical data sheet should enclosed in technical bid to support the number of channels on the system or letter from the manufacturer mentioning the above should be</p>	<p>System must be offered with a minimum of 8,00,000 \geq40,00,000 and or more digital processing channels. or \geq180 and hardware channels. Technical data sheet should enclosed in technical bid to support the number of channels on the system0 or letter from the manufacturer mentioning the above should be</p>

		provided.	provided.
9.	System must be offered with a very high dynamic range of atleast (180 - 220 dB) or more to pick up subtle echoes. Dynamic range in dB must be mentioned in the technical quote	System must be offered with a very high dynamic range of atleast 280dB or more to pick up subtle echoes. Dynamic range in dB must be mentioned in the technical quote	System must be offered with a very high dynamic range of atleast (180—220 dB) — 280dB or more [≥280dB] to pick up subtle echoes. Dynamic range in dB must be mentioned in the technical quote
11.	System must be offered with an acquisition frame rate of range 500 - 1000 frames/ second. Acquisition frame rate should be clearly mentioned in the technical quote.	System must be offered with an acquisition frame rate of range 1900 frames/second. Acquisition frame rate should be clearly mentioned in the technical quote	System must be offered with an acquisition frame rate of range ≥1900 frames/second. Acquisition frame rate should be clearly mentioned in the technical quote
17.	The system shall offer an extended field-of-view imaging (panoramic imaging)/ (Panoramic view) that operates by sweeping a transducer over the anatomy of interest (at least 60 cms). This should be in real-time manner, showing the image as it builds. Should be available on convex and linear transducers. Measurements should be possible. Motion artifact correction-live motion.	The system shall offer an extended field-of-view imaging (panoramic imaging)/(Panoramic view) that operates by sweeping a transducer over the anatomy of interest. This should be in real-time manner, showing the image as it builds. Should be available on convex and linear transducers. Measurements should be possible. Motion artifact correction-live motion	Technical specification prevails
19.	The system should provide scan depths from a minimum of 2cm or less to a maximum of 35 cm or better.	The system should provide scan depths from a minimum of 2cm or less to a maximum of 40 cm or better.	The system should provide scan depths from a minimum of 2cm or less to a maximum of 35 40 cm or better.
20-d	Machine should have touch command screen of a 10” or above for user operations	Machine should have touch command screen of 12" or above for user operation	Technical specification prevails
27	System should have offline quantification workstation for analyzing and quantification 2D and 3D data sets along with latest desktop with CD/DVD writer and Image management software with IMT, ROI, review of 3D/4D	System should have offline quantification workstation for analyzing and quantification 2D and 3D data sets along with latest desktop with CD/DVD writer and Image management software with IMT, ROI (Software & hardware should be	System should have offline quantification workstation for analyzing and quantification 2D and 3D data sets along with latest desktop with CD/DVD writer and Image management software with IMT, ROI, review of

	<p>color and fetal STIC data sets (Software & hardware should be supplied for offcart quantification). Image Management System (IMS) Hardware & Software with BMP, JPEG, MPEG, AVI and DICOM image receiving facility should be installed in the Desk Top computer. Additional software in PC to convert DICOM images to JPEG format for colour & B/W prints on medical grade Colour Laser IRC 3020 printer of 600 DPI.(DICOM3 ready HL7 version 3)</p> <p>All software should be licensed for entire life of the system and upgradeable to 3D & 4D</p>	<p>supplied for offcart quantification). Image Management System (IMS) Hardware & Software with BMP, JPEG, MPEG, AVI and DICOM image receiving facility should be installed in the Desk Top computer. Additional software in PC to convert DICOM images to JPEG format for colour & B/W prints on medical grade Colour Laser IRC 3020 printer of 600 DPI. (DICOM3 ready HL7 version 3). All software should be licensed for entire life of the system and upgradeable to 3D & 4D</p>	<p>3D/4D color and fetal STIC data sets (Software & hardware should be supplied for offcart quantification). Image Management System (IMS) Hardware & Software with BMP, JPEG, MPEG, AVI and DICOM image receiving facility should be installed in the Desk Top computer. Additional software in PC to convert DICOM images to JPEG format for colour & B/W prints on medical grade Colour Laser IRC 3020 printer of 600 DPI.(DICOM3 ready HL7 version 3)</p> <p>All software should be licensed for entire life of the system and upgradeable to 3D & 4D</p>
38-c	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >150 Degree.	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >180 Degree	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >150 180 Degree.
39-c	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >150 Degree.	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >180 Degree	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >150 180 Degree.
41-c	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >150 Degree.	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >180 Degree	Endocavitary transducer with frequency range of 3-11 MHz and FOV of >150 180 Degree.
Suggestion / objections received from M/s Samsung India Electronics Pvt. Ltd.			
1.		System should be recently launched with latest technology & not more than 3 years old.	No change
3.	System must be offered with	Channels to be increased to	System must be offered

	a minimum of 8,00,000 and more digital processing channels or 180 and hardware channels. Technical data sheet should be enclosed in technical bid to support the number of channels on the system or letter from the manufacturer mentioning the above should be provided	80,00,000 digital channels	with a minimum of 8,00,000 or more $\geq 40,00,000$ and ≥ 180 digital processing channels. or ≥ 180 and hardware channels. Technical data sheet should be enclosed in technical bid to support the number of channels on the system0 or letter from the manufacturer mentioning the above should be provided.
9.	System must be offered with a very high dynamic range of atleast (180 - 220 dB) or more to pick up subtle echoes. Dynamic range in dB must be mentioned in the technical quote	Dynamic Range to be increased to 350 dB	System must be offered with a very high dynamic range of atleast (180—220 dB) 280dB or more [$\geq 280\text{dB}$] to pick up subtle echoes. Dynamic range in dB must be mentioned in the technical quote
11.	System must be offered with an acquisition frame rate of range 500 - 1000 frames/ second. Acquisition frame rate should be clearly mentioned in the technical quote.	Higher Frame rate of at least 3000 frames/sec for Cardiac	System must be offered with an acquisition frame rate of range ≥ 1900 frames/second. Acquisition frame rate should be clearly mentioned in the technical quote
20-d	Machine should have touch command screen of a 10” or above for user operations	Touchscreen of at least 12" or more preferred for ease workflow.	Technical specification prevails
37-a	Convex array transducer 50mm curvature and above with frequency range of 1 to 5MHz and >70 Degree FOV.	Single crystal/ purewave Convex transducer with frequency of 1 to 5 MHz & capable of Shearwave Elastography & Fat Quantification for Liver.	Technical specification prevails
37-b	Linear array transducer with frequency range of 3-11 MHz and FOV of > 45mm.	Single crystal / purewave Linear transducer with frequency of 3-11 MHz & capable of Elastography (Shear & Strain) for Breast & Thyroid	Technical specification prevails
37-c	Endocavitary transducer with frequency range of 3-11 MHz and FOV of > 150 Degree.	Endocavity transducer with frequency of 3-11 MHz having wide angle of FOV>200 degrees & capable of Strain Elastography for Cervical	Endocavitary transducer with frequency range of 3-11 MHz and FOV of > 150 180 Degree.

		& Prostate	
Suggestion / objections received from M/s Fujifilm India Pvt. Ltd.			
1	System must be a state of the art model. Should have all digital beam forming technology with super computed signal processing and clinically proven imaging technologies.	System must be a state-of-the-art model. Should have all digital beam forming technology with faster signal processing and clinically proven imaging technologies Supercomputer speed is not available in any medical device	Technical specification prevails
3	System must be offered with a minimum of 8,00,000 and more digital processing channels or 180 and hardware channels. Technical data sheet should enclosed in technical bid to support the number of channels on the system or letter from the manufacturer mentioning the above should be provided.	System must be offered with a minimum of 5,50,000 and more digital processing channels or 180 and hardware channels. Technical data sheet should enclosed in technical bid to support the number of channels on the system or letter from the manufacturer mentioning the above should be provided.	System must be offered with a minimum of 8,00,000 or more ≥40,00,000 and digital processing channels. or ≥180 and hardware channels. Technical data sheet should enclosed in technical bid to support the number of channels on the system or letter from the manufacturer mentioning the above should be provided.
17	The system shall offer an extended field-of-view imaging (panoramic imaging)/ (Panoramic view) that operates by sweeping a transducer over the anatomy of interest (at least 60 cms). This should be in real-time manner, showing the image as it builds. Should be available on convex and linear transducers. Measurements should be possible. Motion artifact correction-live motion.	The system shall offer an extended field-of-view imaging (panoramic imaging)/ (Panoramic view) that operates by sweeping a transducer over the anatomy of interest (at least 45 cms). This should be in real-time manner, showing the image as it builds. Should be available on convex and linear transducers. Measurements should be possible. Motion artifact correction-live motion.	Technical specification prevails
18	System should allow for live image and archive images side-by-side or quad display on a single monitor. This display shall allow any type of image on either side	Please remove this point as there is not such clinical advantage of this function	Technical specification prevails

23	Should have facility to transfer images to an integrated DVD writer & USB Drive without any interfacing.	Should have facility to transfer images to an integrated DVD writer or USB Drive without any interfacing	Technical specification prevails
27	<p>System should have offline quantification workstation for analyzing and quantification 2D and 3D data sets along with latest desktop with CD/DVD writer and Image management software with IMT, ROI, review of 3D/4D color and fetal STIC data sets (Software & hardware should be supplied for offcart quantification). Image Management System (IMS) Hardware & Software with BMP, JPEG, MPEG, AVI and DICOM image receiving facility should be installed in the Desk Top computer. Additional software in PC to convert DICOM images to JPEG format for colour & B/W prints on medical grade Colour Laser IRC 3020 printer of 600 DPI.(DICOM3 ready HL7 version 3)</p> <p>All software should be licensed for entire life of the system and upgradeable to 3D & 4D</p>	Please remove this point for wider participation	<p>System should have offline quantification workstation for analyzing and quantification 2D and 3D data sets along with latest desktop with CD/DVD writer and Image management software with IMT, ROI, review of 3D/4D color and fetal STIC data sets (Software & hardware should be supplied for offcart quantification). Image Management System (IMS) Hardware & Software with BMP, JPEG, MPEG, AVI and DICOM image receiving facility should be installed in the Desk Top computer. Additional software in PC to convert DICOM images to JPEG format for colour & B/W prints on medical grade Colour Laser IRC 3020 printer of 600 DPI.(DICOM3 ready HL7 version 3)</p> <p>All software should be licensed for entire life of the system and upgradeable to 3D & 4D</p>
28	Transducer: All transducer connectors should be pin/pinless, slim, sleek and light weight for less wear and tear. Should have single crystal / pure crystal /	Transducer: All transducer connectors should be pin/pinless, slim, sleek and light weight for less wear and tear. Should have single crystal / MultiLayer Crystal / pure crystal /	Technical specification prevails

	matrix/ XD clear technology for convex probes	matrix/ XD clear technology for convex probes	
37-h	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide atleast 3 enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes.	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide atleast 2 or more enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes.	Technical specification prevails
38-c	Endocavitary transducer with frequency range of 3-11 MHz and FOV of > 150 Degree.	2-10 MHz Bi-Place Transrectal probe with 180- degree fov for both plane should be compatible Urology department should have dedicated probe for Urology scans. Kindly reconsider	Endocavitary transducer with frequency range of 3-11 MHz and FOV of > 150 180 Degree.
38-h	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide atleast 3 enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes.	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide atleast 2 or more enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes	Technical specification prevails
39-h	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide atleast 2 or more	Technical specification prevails

	atleast 3 enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes.	enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes	
40-a-ii	5.0 Mhz to 8 Mhz Pediatric Cardiac Phased array transducer	2 Mhz to 9 Mhz Pediatric Cardiac Phased array transducer	Technical specification prevails
40-a-iii	Neonatal Cardiac Phased array Cardiac array transducer 4.5 Mhz to 12 Mhz	Neonatal Cardiac Phased array Cardiac array transducer 4 Mhz to 13 Mhz	Technical specification prevails
41-h	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide atleast 3 enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes.	The system should have an enhancement mode to provide clear visualization of Needle insertion path during live Ultrasound Biopsy procedures. This function should provide atleast 2 or more enhancement levels and should select the best scan angle manually or automatically. It should work with all common needle lengths and sizes.	Technical specification prevails

Thus meeting concluded at 5.30 p.m.

**Sd/-
HoD & Prof
(Radio. Dept) KEM**

**Sd/-
HoD & Prof
(Radio . Dept) LTMG**

**Sd/-
HoD & Prof
(Radio . Dept) Nair**

**Sd/-
HoD & Prof
(Radio . Dept) Cooper**

**Sd/-
Ex. Eng. (CPD)**

**Sd/-
Dy.Ch.Eng (CPD)**

**Sd/-
C.A. (CPD)**